PFP Recovery Update – February 6, 2018

Updated 2:30 p.m. PST

Updates since February 5, 2018 highlighted

The focus at PFP is on the health and safety of the workforce, addressing worker concerns, ensuring PFP remaining facility debris and rubble piles are stable, and mitigating the potential for any additional spread of contamination. CHPRC is not authorized to conduct any demolition work at PFP until DOE has been briefed and approves the recovery plan.

Plant Status

System/Area	Status
PFP Workforce	• No safety events since last report.
PRF Area	• Area remains stable since last report.
PFP Property Area	• On Feb. 6, crews applied fixative to office trailers within the PFP complex and conducted routine fixative application to demolition debris pile, the remaining portions of the main Plutonium Finishing Plant building (234-5Z), and the grounds around those areas. Crews also began erecting a tent under which crews will decontaminate PFP-controlled government vehicles.

Radiological Surveys, Sampling and Analysis

Surface monitoring: metal pans, called "cookie sheets," are placed throughout the work control area and analyzed twice a day. Any contamination detected is expressed in disintegrations per minute, a unit that measures how many radioactive atoms decay in a minute.

Continuous air monitors (CAMs): stationary monitors that are located in work areas and elsewhere, set to alarm if contamination reaches levels that would require protective measures for workers. Contamination values are expressed as derived air concentrations times hours (DAC-hours).

Air samplers: filters in the CAMs are changed out routinely and analyzed for contamination.

On-Site and Environmental:

Cookie Sheets (67 total)		
	Feb. 6 Day Shift	Feb. 5 Swing Shift
Number Surveyed	53	67
Number Clean*	53	67
Number Contaminated *(Note location and level)*	0	0

*Clean = direct contamination < 500 dpm/100cm² and removable contamination < 20 dpm/100cm² (or < 100 dpm/100cm² in a posted CA or HCA)

- **Continuous Air Monitor** Readings (15 total): All CAMs reading <1 DAC-hr as of 12:30 p.m. PST Feb. 5.
- **Samplers** (22 total): Air filters removed and analyzed with no indication of radioactivity other than radon as of 11:00 p.m. PST Feb. 2.

Bioassays: Bioassays are used when a person is potentially exposed to contamination to determine whether or not there has been an intake (e.g., inhalation or ingestion) of radioactive material and an estimated dose. The table below provides a summary of bioassay results following the spread of contamination in December. The data shows radiological doses to personnel in millirem (mrem) and is

current as of Feb. 6 at 3:30 p.m. This information will be updated as more results are received. Individual employees are briefed on their bioassay results as soon as the results are available.

Requested	273
Negative	169
Preliminary Positive*	11
Positive with Initial Dose Estimate Less than 1 mrem: 0 1-10 mrem: 1 10-20 mrem: 1	2
Positive with Verified Dose Assigned Less than 1 mrem: 1 1-10 mrem: 0 10-20 mrem: 0	1

*Preliminary Positive: Initial indication from laboratory of positive result with no dose estimate. Subject to change (to negative) as additional analysis is completed).

- Doses are the expected dose over 50 years.
- DOE requirements for protecting individuals from ionizing radiation set an administrative control level, or limit, of 100 mrem/year for non-radiological workers and members of the public visiting DOE sites (DOE Order 458.1). The DOE dose limit for radiological workers is 500 mrem/year.

External:

- **Department of Health Web Page**: The Washington State Department of Health has set up a web page with environmental monitoring information about Hanford.

- **Government Vehicle Radiological Surveys:**
  - Surveys of PFP-controlled government vehicles were completed Jan. 23. Decontamination and dispositioning of 27 contaminated vehicles is ongoing. Those vehicles remain in a posted contamination area.

	Total
PFP-Controlled government vehicles surveyed	97
Decontaminated and returned to service	2
Contaminated and awaiting disposition (held as radiologically-controlled vehicles or decontaminated)	27
No contamination found and returned to service	68

- **Personal Vehicle Radiological Surveys**:
  - On Feb. 1, a commercial delivery driver contacted DOH to request a survey of his delivery truck as he stated he routinely makes deliveries on the Hanford Site. Working collaboratively with DOH, DOE-RL is following up to determine the times the commercial vehicle has been on site and a time which is convenient for them to have the vehicle surveyed. CHPRC will honor all requests for surveys.
  - Seven personal vehicles identified with contamination at COB Dec. 19 were decontaminated and released as of 3:30 p.m. PST on Tuesday, Dec. 26.

- On Jan. 31, crews completed a follow-up survey of one of these vehicles, a rental car that was on the Hanford Site in December and was decontaminated and released. No contamination was detected during the Jan. 31 follow-up survey.
- After one of the seven vehicles previously decontaminated and left near the demolition area by its owner was re-surveyed, and contamination found on Friday, Jan. 26, the other six owners were contacted. No contamination was detected on two of the vehicles that were returned to the Hanford Site for surveying. Three vehicles belong to employees who declined to have their cars re-surveyed.
- On Jan. 30, crews completed surveying parking/storage locations associated with the personal vehicle found contaminated Jan. 26. No contamination was detected at the parking/storage locations: near MO-287 (office trailer outside the PFP work control zone), in 2711-E (a garage in the 200 East Area with a lift for survey of the undercarriage), 6681-D (a maintenance building at the Environmental Restoration Storage Facility for additional surveys), and a radiological material area inside the PFP work control zone (after contamination was detected).
    - This personal vehicle was driven on Route 3 between MO-287 (in the 200 West area of the Hanford Site) to the 2711-E garage (in the 200 East area). On Feb. 3, crews completed surveys of the travel path with no contamination found.

- **Home Surveys:** All original requested home surveys (seven total) were completed (Dec. 20) with no contamination found.
    - On Feb. 5, a PFP employee requested a home survey. On Feb. 6, crews conducted the survey of the home, with oversight from DOE and in the presence of personnel from the Washington Department of Health. No contamination was detected.

Expert Panel: Members of the PFP Expert Panel continue to meet. The panel consists of federal, officials with expertise in several scientific and technical disciplines who can consult with industry and academic leaders with similar expertise. The panel will evaluate CHPRC's recovery from the contamination event and its proposed technical approach for safely completing demolition of PFP. The panel will provide observations and recommendations to CHPRC. The Expert Panel's charter and biographies of its members are available at www.Hanford.gov.

Causal Analysis: CHPRC is in the process of completing a root cause evaluation report that will identify the factors that led to the spread of contamination and that will propose corrective actions to reduce the likelihood of recurrence. Input from workers and Jacobs Engineering will be included in the root cause analysis.

Future Actions

- Daily contamination surveys will be conducted.
- Air samplers will continue to be monitored.
- Application of fixative and soil will occur as weather allows

Workforce Management

- The workforce remains committed to the current mission of hazard recognition and control despite the challenging situation.

Communications

- On Feb. 6, Tom Teynor, DOE's Federal Project Director for the PFP demolition, updated the Hanford Advisory Board's River and Plateau Committee on current PFP recovery actions during a previously-scheduled committee meeting in Richland.
- On Feb. 6, PFP representatives and representatives from Mission Support Alliance's internal dosimetry program continued to give the briefing "Perspective on Internal Contamination and Dose" to Hanford Site employees *(Attachment 1)*. The briefing has been posted on the PFP web page on www.Hanford.gov.